Revision 1

Store at -20C

#2321

# Phospho-(Thr) MAPK/CDK Substrate Mouse mAb


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**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | Source/Isotype: |
|---|---|---|---|
| W, IHC-P, E-P | H M R All | Endogenous | Mouse IgM |

## Product Usage Information

| Application | Dilution |
|---|---|
| Western Blotting | 1:5000 |
| Immunohistochemistry (Paraffin) | 1:400 |
| Peptide ELISA (DELFIA) | 1:1000 |

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-(Thr) MAPK/CDK Substrate Mouse mAb detects phospho-threonine only when followed by proline. It reacts with proteins/peptides phosphorylated on the Thr-Pro motif in an otherwise highly context-independent fashion. The antibody does not cross-react with phospho-threonine in the absence of an adjacent proline. The antibody does not cross-react with phospho-tyrosine, but does react with some phospho-serine peptides containing the phospho-serine-proline motif (e.g., phospho-Elk-1). (U.S. Patent No's.: 6,441,140; 6,982,318; 7,259,022; 7,344,714; U.S.S.N. 11,484,485; and all foreign equivalents.)

## Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic phospho-threonine-proline-containing peptides . This antibody is a mouse IgM clone and can be recognized by anti-mouse Ig (whole molecule) secondary antibody. Antibody is purified by protein A chromatography.

## Background

The MAPK and CDK families of serine/threonine protein kinases play important roles in cell signaling and cell cycle control. These kinases phosphorylate threonine or serine followed by a proline residue (1-6). To facilitate the study and discovery of new MAPK and CDK substrates, Cell Signaling Technology has developed antibodies that bind to phospho-threonine or phospho-serine followed by proline.
As determined by ELISA using a wide variety of phospho-Thr-Pro peptides, Phospho-(Thr) MAPK/CDK Substrate Monoclonal Antibody recognizes the phospho-Thr-Pro motif in a highly context-independent fashion. It also interacts with a broad range of phospho-Thr-Pro-containing proteins as determined by Western blot analysis of nocodazole-treated Jurkat cell extracts resolved on a 2-D gel.

## Background References


1. Pearson, R.B. and Kemp, B.E. (1991) *Methods Enzymol* 200, 62-81.
2. Seger, R. and Krebs, E.G. (1995) *FASEB J* 9, 726-35.
3. Nurse, P. (2000) *Cell* 100, 71-8.
4. Cross, T.G. et al. (2000) *Exp Cell Res* 256, 34-41.
5. Yang, C.C. et al. (1998) *J Protein Chem* 17, 329-35.
6. Reynolds, C.H. et al. (2000) *J Neurochem* 74, 1587-95.


## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **E-P:** Peptide ELISA (DELFIA)

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **All:** All Species Expected

## Trademarks and Patents



## Limited Uses

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